

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application:

1. (Currently Amended) A method ~~of using a marker comprising an integrin alpha 10 chain expressed on the cell surface of mesenchymal stem cells or intracellularly in mesenchymal stem cells as a marker for detecting integrin alpha 10~~ chain-expressing mammalian mesenchymal stem cells, wherein said method comprises the steps of

- a) providing a sample comprising mesenchymal stem cells,
- b) contacting the sample with an antibody which specifically binds integrin alpha 10 chain,
- c) detecting integrin alpha 10 chain expression on the cell surface of cells of the sample or intracellularly in cells of the sample, and
- d) positively correlating the integrin alpha 10 chain expression detected in step c) with the cells being said integrin alpha 10 chain-expressing mesenchymal stem cells.

2. (Previously Presented) The method according to claim 1, wherein the integrin alpha 10 chain is expressed as a heterodimer in combination with an integrin beta 1 chain.

3. (Previously Presented) A method for identifying integrin alpha 10 chain-expressing mammalian mesenchymal stem cells, the method comprising the steps of

- a) providing a sample comprising mesenchymal stem cells,

- b) contacting the sample with an antibody which specifically binds integrin alpha 10 chain,
- c) detecting integrin chain alpha 10 expression on the cell surface of cells of the sample or intracellularly in cells of the sample,
- d) positively correlating the integrin chain alpha 10 expression detected in step c) with the cells being said integrin alpha 10 chain-expressing mesenchymal stem cells, and
- e) identifying the cells in step c) as said integrin alpha 10 chain-expressing mesenchymal stem cells according to the correlation in step d).

4-5. (Canceled)

6. (Previously Presented) The method according to claim 3, wherein the expression in step c) is detected by an immunoassay.

7-14. (Canceled)

15. (Currently Amended) A method for identification of integrin alpha 10 chain-expressing mammalian mesenchymal stem cells, ~~comprising utilizing a marker comprising an integrin alpha 10 chain expressed on the cell surface of mesenchymal stem cells or intracellularly in mesenchymal stem cells~~, wherein said method comprises the steps of

- a) contacting a sample comprising mesenchymal stem cells with an antibody which specifically binds an integrin alpha 10 chain expressed on the cell surface of mesenchymal stem cells or intracellularly in mesenchymal stem cells the marker,

- b) detecting the marker integrin alpha 10 chain in cells of the sample, and
- c) identifying the cells in step b) as said integrin alpha 10 chain-expressing mammalian mesenchymal stem cells based on the presence of the marker.

16-18. (Cancelled)

19. (Currently Amended) The method according to claim 1, wherein the antibody in step b) is a polyclonal antibody, monoclonal antibody, or fragment thereof.

20. (Cancelled)

21. (Currently Amended) The method according to claim 3, wherein the antibody in step b) is a polyclonal antibody, monoclonal antibody, or fragment thereof.

22. (Cancelled)

23. (New) The method according to claim 15, wherein the antibody in step a) is a polyclonal antibody, monoclonal antibody, or fragment thereof.

24. (New) The method according to claim 1, wherein the antibody in step b) is attached to solid support.

25. (New) The method according to claim 3, wherein the antibody in step b) is attached to solid support.

26. (New) The method according to claim 15, wherein the antibody in step a) is attached to solid support.

27. (New) The method according to claim 1, wherein the antibody in step b) is labeled with one or more fluorochrome(s).

28. (New) The method of claim 27, wherein the fluorochrome is phycoerythrin, allophycocyanin, fluorescein, or Texas red.
29. (New) The method according to claim 3, wherein the antibody in step b) is labeled with one or more fluorochrome(s).
30. (New) The method of claim 29, wherein the fluorochrome is phycoerythrin, allophycocyanin, fluorescein, or Texas red.
31. (New) The method according to claim 15, wherein the antibody in step a) is labeled with one or more fluorochrome(s).
32. (New) The method of claim 31, wherein the fluorochrome is phycoerythrin, allophycocyanin, fluorescein, or Texas red.
33. (New) The method according to claim 1, wherein the detecting in step c) is performed by immunoprecipitation, Western blotting, or flow cytometry.
34. (New) The method according to claim 3, wherein the detecting in step c) is performed by immunoprecipitation, Western blotting, or flow cytometry.
35. (New) The method according to claim 15, wherein the detecting in step b) is performed by immunoprecipitation, Western blotting, or flow cytometry.